

New Uses for Athletic Taping

PTs and ATCs add kinesiology tape to their tool kits.

By Greg Thompson, July 19, 2011

When Steven Huber, PT, CKTI, heard his 5-year-old patient declare that she "hated her arm," the physical therapy veteran knew he had a challenge on his hands. Born with a brachial-plexus injury-also known as Erb's Palsy-the young girl had already received physical and occupational therapy from birth to 2 years.

As she grew, she began to use her arm incorrectly, developing tightness and abnormal movement. After three weeks and five visits with Huber, she is playing T-ball, raising her hand in class and using the arm to eat with.

"We used kinesiology taping on the very first day, and we were able to get her arm to straighten to about 85 percent of normal," said Huber, owner of Huber Associates, a private physical therapy practice in Auburn, ME.

At the Cleveland Clinic Children's Hospital, Trish Martin, PT, CKTI, confirmed that kinesiology taping has also helped her Erb's Palsy/brachial plexus patients. As a one-time skeptic, she now believes kinesiology taping has massive potential for all kinds of ailments. "The first time I tried it on an injury, I honestly did not believe it could take away swelling or bruising," confessed Martin, who serves as a therapy services satellite manager. "However, kinesiology taping decreased the circumference of my patient's thigh by about 4 inches within two days. It was ridiculous. I now use it for acute and chronic injuries with incredible results."

Variety of Conditions

As a certified kinesiology taping instructor (CKTI) for the past nine years, Huber has also seen his share of amazing outcomes. His only regret is that he did not have the treatment in his back pocket when he saw a particular sciatica patient a dozen years ago. Huber treated the man in 1999 with mixed results.

Two years ago, the man came back after reading about Huber's work with the "funny" tape. He still had sciatica, but this time Huber taped the sciatica path. "We did this once a week for about 6 weeks," said Huber, who is also an orthotist. "Since then, he has had no sciatica. I wish I had this 12 years earlier when I first saw this man."



Within the pediatric population, Martin most often uses kinesiology taping on children with low tone, torticollis, cerebral palsy and obstetrical brachial

plexus injuries. Within these disorders, muscle imbalances tend to be greater and therapy timeframes can extend to years. "I once treated a young boy with low tone, taping his abdominals and back, including his lower and middle trapezius muscles and scapulae for stability," said Martin. "With the tape, he was able to sit up for longer and attempt play. He wore the tape for about six months and was much more functional."

Martin usually sees pediatric patients once a week, with children wearing the tape for about six days. The night before the next appointment, parents can take the tape off, allowing the skin to breathe while applying moisturizing lotion.

Patients are re-taped the next day. "You must be careful with the pediatric population," cautioned Martin. "When we do these applications, we don't put a lot of tension on the tape because their skin is more fragile. Some kids will only wear for three days and off for two days. We instruct parents and caregivers how to apply in these situations."

Correct Course

Used in conjunction with strengthening and stretching, Huber is convinced that the correct application of kinesiology taping can foster healing and pain relief in patients of all ages. "Kinesiology taping is not a sole treatment and it is not the only answer," said Huber. "I use kinesiology taping probably with 80 percent of my caseload in conjunction with other things. You need a strengthening program, modalities and myofascial techniques. Kinesiology taping enhances what you do and carries on the effects of what you are doing between treatments—all while promoting healing."

What's Happening?

With a heat-activated backing of medical grade adhesive, the underside of kinesiology tape resembles the shape of a fingerprint, and Huber said it is this fingerprint that replicates the inner digitation of nerve endings throughout the surface of the skin. "The tape lifts the tissue where there is adhesive and it is stuck to the skin," explained Huber. "The tissue is not lifted as much in the non-adhesive areas. You are causing micro-convolutions in the epidermis that transmit down through the lift, creating space under the tape. This opens the end tubercle/lymphatic system to increase fluid flow, while decompressing nociceptors/pain receivers."

Application and direction dictate therapeutic effect. Whether it's from muscle origin to insertion or the opposite, the lifting and recoil influence the muscle. This influence continues after the tape is peeled off, a phenomenon that is news to most learners in Huber's seminars. "The biggest misconception about tape is that it only works when it is on," he said. "You are trying to change the underlying tissue for long-term effect. The object is to use tape as a tool with the end goal of not using it. That's similar to physical therapy, where we attempt to correct the problem and ultimately stop physical therapy."

Yet another misconception is that kinesiology tape serves the same function as rigid tape. Martin dispels the misunderstanding in her seminars at the Cleveland Clinic, where she welcomes skeptics. "People need to be a bit more open to the possibilities," said Martin. "I invite skeptics, because they are not likely to make the tape into a hammer while everything becomes a nail. I was using it initially as a splint or support, because I did not buy into the other effects. Now I tell students that kinesiology taping can and should be used for swelling and fascial release."

Based on the premise that the body "wants to be in balance," Huber contends the tape gives the central nervous system information to process. "Our body learns through consistency of input and repetition," he explained. "What better way than to put something externally on the skin to give a constant sensory input over a three- to five-day period to help a muscle relearn what it is supposed to do?"

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The 2008 Beijing Olympics attracted many corporate logos, but the gold-medal beach volleyball performance of Kerri Walsh and Misty May-Treanor had people talking. The colorful kinesiology tape atop Walsh's 6-ft, 3-inch frame, in stark contrast to her white two-piece bathing suit, simply could not be missed.

Internet message boards espoused comical theories about possible political statements, obscure sponsors' logos hidden in the taping patterns or even tattoo cover-ups. According to published reports, Walsh's therapists used the tape to stabilize a surgically repaired shoulder and encourage blood circulation.

Huber estimated that more than 200 athletes sported tape during the Olympics, and use among the general public has only climbed in the intervening years. For Martin's young patients, a certain "cool factor" has even replaced the stigma of wearing the tape.

"You get to wear the same tape that athletes are wearing," enthused Martin. "Prior to the Olympics, a lot of athletes wore the tape but it was beige or covered by uniforms."

"We ran out of product after Kerri Walsh appeared at the Beijing Olympics," confirmed Huber with a chuckle. "The tape was extremely visible because she-and her opponents who were also wearing the tape-all had such little clothing on. Many times, athletes cover the tape to avoid the area becoming a target. Until this year, kinesiology tape was not apparent in basketball because it was thought to detract from the uniform code, but now they are wearing it."

After a decade of teaching and treating, Martin and Huber have seen the anecdotal evidence pile up regarding the therapeutic effectiveness of kinesiology taping. However, both acknowledged that in today's evidence-based environment, more research is needed to fully validate its beneficial impact.

They welcome formal studies and are confident that kinesiology taping will perform well. "I have been working with patients who have Lou Gehrig's disease on issues such as head control and respiratory problems," said Huber. "Topics are limitless at this point, and as we learn more I am confident the applications will only expand."

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